

Appl. No. 10/802,505  
Response Dated July 25, 2005  
Reply to February 28, 2005, Office Action

Amendments to the Claims

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

40. (Previously presented) A trawl comprising:  
a plurality of mesh cells, each mesh cell including at least  
three mesh bars, at least one portion of at least a first mesh bar  
in at least one of the mesh cells including:  
5       a. a first product strand having a core product strand  
          enclosed within a sheath that resists sliding along the  
          core product strand during assembly and field operations  
          of the trawl; and  
      b. a mechanical connection couples the first product strand  
10      forming the first mesh bar to a second product strand  
          forming a second mesh bar of the at least one mesh cell,  
          the mechanical connection including a clamp which  
          encloses at least the slide-resistant, sheathed portion  
          of the first product strand,  
15      whereby the sheathed portion of the first product strand  
          disposed within the clamp resists separation of the sheath from the  
          core product strand during trawl assembly and field operations thus

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better preserving design characteristics of the first mesh bar and the trawl.

41. (Previously presented) The trawl of claim 40 wherein the sheath encircling the slide-resistant portion of the first product strand includes a plurality of product strands which both encircle and have a smaller diameter than the core product strand,  
5 at least several of the encircling product strands that are disposed within the clamp being sufficiently densely woven that the sheath resists movement relative to the core product strand.

42. (Previously presented) The trawl of claim 40 wherein the sheath encircling the slide-resistant portion of the first product strand includes a plurality of product strands which both encircle and have a smaller diameter than the core product strand,  
5 at least several of the encircling product strands that are disposed within the clamp being sufficiently densely woven that the sheath maintains a cross sectional shape of the slide-resistant, sheathed portion of the first product strand during field operations.

43. (Previously presented) The trawl of claim 40, 41, or 42 wherein the mechanical connection coupling the first product strand

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to the second mesh bar includes a first loop formed at an end of the first product strand, the first loop being formed by two 5 segments of the first product strand that are secured to each other by the clamp.

44. (Canceled)

45. (Previously presented) The trawl of claim 41 wherein the core product strand includes a twisted product strand.

46. (Previously presented) The trawl of claim 41 wherein the core product strand includes a heat-set, twisted product strand.

47. (Previously presented) The trawl of claim 41 wherein the core product strand includes a braided product strand.

48. (Previously presented) The trawl of claim 41 wherein the core product strand includes a heat-set, braided product strand.

49. (Previously presented) The trawl of claim 41 wherein the core product strand includes a parallel laid product strand.

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50. (Previously presented) The trawl of claim 41 wherein the core product strand includes a heat-set, parallel laid product strand.

51. (Previously presented) The trawl of claim 41 wherein the core product strand includes a bonding agent.

52. (Previously presented) The trawl of claim 51 wherein the bonding agent is a polymer.

53. (Previously presented) The trawl of claim 52 wherein the polymer is a urethane based polymer.

54. (Previously presented) The trawl of claim 40, 41, 42 or 45 wherein the core product strand has substantially minimum residual torque.

55. (Previously presented) The trawl of claim 40, 41, 42 or 45 wherein the slide-resistant, sheathed portion of the first product strand has substantially minimum residual torque.

56. (Previously presented) The trawl of claim 43 wherein the core product strand has substantially minimum residual torque.

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57. (Previously presented) The trawl of claim 43 wherein the slide-resistant, sheathed portion of the first product strand has substantially minimum residual torque.

58. (Cancelled)

59. (Cancelled)

60. (Withdrawn) A thread comprising:

- a. a core product strand; and
  - b. an encircling sheath having:
    - i. a plurality of encircling product strands each having a smaller diameter than a diameter of the core product strand of the thread; and
    - ii. at least one spiraling product strand interwoven with the encircling product strands and having a diameter that is larger than the diameter of each of the encircling product strands.

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61. (Withdrawn) The thread of claim 60 wherein the diameter of the spiraling product strand is less than the diameter of the core product strand.

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62. (Withdrawn) The thread of claim 60 or 61 wherein the thread is mechanically secured to another object by a clamp.

63. (Withdrawn) The thread of claim 60 or 61 wherein a loop is formed in the thread for securing the thread to another object, the loop being formed by two segments of the thread that are mechanically secured to each other by a clamp.

64. (Withdrawn) A trawl comprising:  
a plurality of mesh cells, each mesh cell including at least three mesh bars:

- a. at least one portion of at least a first mesh bar in at least one of the mesh cells having:
  - i. a core product strand encircled by a sheath, the sheath including a plurality of encircling product strands each having a smaller diameter than a diameter of the core product strand; and
  - ii. at least one spiraling product strand interwoven with the encircling product strands and having a diameter that is larger than the diameter of each of the encircling product strands; and
- b. a mechanical connection couples the first product strand forming the first mesh bar to a second product strand

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forming a second mesh bar of the at least one mesh cell, the mechanical connection including a clamp which encloses at least the first product strand.

65. (Withdrawn) The trawl of claim 64 wherein the mechanical connection coupling the first product strand to the second mesh bar includes a first loop formed at an end of the first product strand, the first loop being formed by two segments of the first product strand that are secured to each other by the clamp.

66. (Withdrawn) The trawl of claim 65 wherein an end of the second product strand forming the second mesh bar includes a second loop, and wherein the second loop passes through the first loop.

67. (Previously presented) An improved method for catching fish with a trawl system comprising the steps of:

- a. assembling the trawl system by combining components selected from a group consisting of a trawl, upper bridles and frontropes, the trawl including a plurality of mesh cells, each mesh cell including at least three mesh bars:

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- 10                   i. at least one portion of at least a first mesh bar  
                      in at least one of the mesh cells including a first  
                      product strand having a core product strand en-  
                      closed within a sheath that resists sliding along  
                      the core product strand during assembly and field  
                      operations of the trawl; and
- 15                   ii. a mechanical connection couples the first product  
                      strand forming the first mesh bar to a second  
                      product strand forming a second mesh bar of the at  
                      least one mesh cell, the mechanical connection  
                      including a clamp which encloses at least the first  
                      product strand; and
- 20                   b. from a vessel disposed on a surface of a body of water:  
                      i. deploying into the body of water as part of the  
                      trawl system the sheathed, first mesh bar; and  
                      ii. propelling at least the sheathed, first mesh bar  
                      through the body of water.

68. (Previously presented) The improved method for catching fish of claim 67 wherein the sheath encircling the slide-resistant portion of the first product strand is formed with a plurality of product strands which both encircle and have a smaller diameter than the core product strand, at least several of the encircling

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product strands that are disposed within the clamp being sufficiently densely woven that the sheath resists movement relative to the core product strand.

69. (Previously presented) The improved method for catching fish of claim 67 wherein the sheath encircling the slide-resistant portion of the first product strand is formed with a plurality of product strands which both encircle and have a smaller diameter than the core product strand, at least several of the encircling product strands that are disposed within the clamp being sufficiently densely woven that the sheath maintains a cross sectional shape of the slide-resistant, sheathed portion of the first product strand during field operations.

70. (Previously presented) The improved method for catching fish of claim 67, 68, or 69 wherein assembling the trawl system includes forming a first loop at an end of the first product strand by clamping together two segments of the first product strand.

71. (Canceled)

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72. (Previously presented) The improved method for catching fish of claim 67, 68 or 69 wherein the core product strand is formed with substantially minimum residual torque.

73. (Previously presented) The improved method for catching fish of claim 67, 68 or 69 wherein the slide-resistant, sheathed portion of the first product strand is formed with substantially minimum residual torque.

74. (Previously presented) The improved method for catching fish of claim 70 wherein the core product strand is formed with substantially minimum residual torque.

75. (Previously presented) The improved method for catching fish of claim 70 wherein the slide-resistant, sheathed portion of the first product strand is formed with substantially minimum residual torque.

76. (Cancelled)

77. (Cancelled)